

The Institution is not, as a body, responsible for the opinions expressed by individual authors or speakers

THE JOURNAL OF THE INSTITUTION OF ELECTRICAL ENGINEERS

EDITED BY W. K. BRASHER, SECRETARY

VOL. 90. PART I (GENERAL), No. 33.

SEPTEMBER 1943

THE WIRELESS SECTION

The Institution has endeavoured throughout the 70 odd years of its existence to cater for the requirements of those engaged professionally in the applications of electricity to the needs of civilization in this country. It was originally founded as the Society of Telegraph Engineers because telegraphic communication was the earliest useful application of the science of electricity and magnetism. The change to the present more comprehensive title was made to correspond to the rapidly growing developments in the generation and use of electrical power. The rapid developments in wireless communication technique during the war of 1914-18 were recognized by The Institution in the formation of the Wireless Section in 1919; and during the intervening years in which three other Sections have been formed the activities and status of the first Section, which now deals with radio communication, high-frequency engineering in all its various forms and the electrical recording and reproduction of sound, have steadily increased.

Long before the present war the Council recognized that, whilst maintaining the standard of the qualifications for membership, more opportunity should be afforded to the physicist engaged in wireless work to become a member. It is particularly opportune to draw attention to this fact at the present time, when a large number of men engaged in scientific and technical radio work would probably refer to themselves as radio physicists rather than as wireless or radio engineers. Many modern applications of radio technique demand a comprehensive knowledge of physical optics as well as of electricity, and the Council are fully alive to the large influx of members to the profession who, although not having received the usual training of an electrical engineer, nevertheless hold degrees or equivalent qualifications in physics and are fully expert in their own branch of radio technique. These radio physicists are welcomed as potential members of the appropriate grade of The Institution, which, with their aid, will continue to carry out the duties imposed by its Charter, one of which is to maintain the standard, and incidentally the prestige, of the properly qualified and experienced members of the electrical engineering profession. Any suggestion that it is unnecessary for the radio physicist to have an adequate fundamental knowledge of electrical engineering is

countered by the fact that the sources of power which he uses are always electrical, and very often at high and dangerous voltages. An inadequate knowledge of the principles and the precautions to be observed may lead to serious technical troubles and even fatal results. In most cases the designers and constructors of radio equipment must be held responsible for the safety of those who use and operate it, and this means that it must conform to certain standards laid down from time to time by the electrical engineering profession and industry. Only in this way can wireless or radio engineering progress rapidly and efficiently on its assigned path.

It may be asked, "What has the Wireless Section of The Institution done for its members in the past, and what will it do in the future?" Ever since its formation the Section has provided a forum where papers have been read and discussed, lectures delivered by prominent members of the profession, and informal discussions arranged more particularly for the junior members. All the papers and lectures have been published in the *Journal* and, since 1926, in the special Proceedings of the Wireless Section (now termed Part III of the *Journal*). These Proceedings contain a comprehensive record of the progress of the science of wireless engineering, the subject matter ranging from detailed discussions of the physics of the ionosphere to the engineering features of the most powerful wireless transmitting station in the world and the first television station to be used for a public service. In spite of the difficulties of the present time, and the necessity of complying with security regulations, a considerable diversity of subjects was dealt with during the past session.

As to the immediate future, the Wireless Section Committee have formed a number of specialist Panels dealing with such subjects as Principles and Practice of Radio Communication, Broadcasting and Television, Electronics, Standards and Measurements, and Materials and Components. The names of these subjects suggest the nature of the papers and discussions which will shortly be forthcoming. One early result of this activity will be noticed in the programme for the first half of the new session which has already been arranged and will be found in "Institution Notes."

In drawing up the programme the Committee have constantly in mind the needs of the various classes of members, seniors and juniors alike, of the Wireless Section, particular attention being given to the requirements of those who, deeply immersed in one special line of work, would like to be kept generally informed of what is happening in other branches of the profession.

While all these ideals cannot be achieved easily under present conditions, the structure is already well founded for the expansion of the Section's activities when the Censor releases the available technical material for the meetings and, by no means a negligible factor, the Paper Controller releases sufficient paper to provide the necessary space in the *Journal*.
R. L. S-R.
